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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,734	11/29/2001	Pamela C. Yelick	10498-00031	4087

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BANNER & WITCOFF, LTD.  
28 STATE STREET  
28th FLOOR  
BOSTON, MA 02109

EXAMINER

RIBAR, TRAVIS B

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 11/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/997,734

Applicant(s)

YELICK ET AL.

Examiner

Travis B Ribar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "polymer fibers" in line 3. There is insufficient antecedent basis for this limitation in the claim. The examiner is not sure if the applicant is using this phrase to define the size of the pores in the porous matrix or not. For the purpose of examination, this phrase will be assumed to define the pore size in the porous matrix.

4. Claim 4 is rejected for solely defining a future intended use for the invention of claim 1. Since a future intended use for an invention does not add a structural requirement or patentable issue to the invention, any reference or combination of references that meet the requirements of claim 1 will also inherently meet the requirement of claim 4.

5. Claims 2-3 are rejected due to their dependence from claim 1.

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***Claim Interpretations***

6. The examiner notes that claim 1 as it is currently written does not require the presence of tooth bud cells. Since the claim does not require the presence of the tooth bud cells, the claim that further limits this aspect of the invention (claim 2) may be met by a reference or combination of references that teach the invention defined in claim 1 but do not include tooth bud cells.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

8. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Burg.

Burg describes a method of making new dental tissue (paragraph 11). The method includes using a porous matrix made from a biocompatible biodegradable polymer (paragraphs 23 and 19). The polymer is the same as the polymer the applicant claims in claim 3 and the pore size is the same as the size shown in the applicant's claim 1.

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The biodegradation rate of any polymer is a property inherent to the polymer. Since the polymer in Burg is the same as the polymer in the present application, the same biodegradation rate (defined in claim 1) is present in the reference, even though it is not explicitly defined.

The reference does not require the presence of tooth bud cells, so it meets this part of claims 1 and 2 as well, as explained earlier in this office action. The reference also meets claim 4 because it meets the requirements of claim 1. This relationship between claims is also discussed earlier in the office action.

9. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Walter et al.

Walter et al. discloses a moldable implant material that is used to grow new dental tissue (column 5, line 61). The method involves using a porous matrix (column 2, line 67) of biodegradable polymer. The pore size (column 3, line 20) and the biodegradable polymer is the same as those the applicant claims in claims 1 and 3.

The biodegradation rate of any polymer is a property inherent to the polymer. Since the polymer in Walter et al. is the same as the polymer in the present application, the same biodegradation rate (defined in claim 1) is present in the reference, even though it is not explicitly defined.

The reference does not require the presence of tooth bud cells, so it meets this part of claims 1 and 2 as well, as explained earlier in this office action. The reference

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also meets claim 4 because it meets the requirements of claim 1. This relationship between claims is also discussed earlier in the office action.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burg in view of each of Hammarstrom et al. ('891) and Hammarstrom et al. ('221).

Burg discloses using a porous polymer matrix as a scaffold in order to grow tissue and has been discussed above. However, Burg does not disclose that the method can include using the tooth cells that the applicant defines in claim 2.

Hammarstrom et al. ('891) and Hammarstrom et al. ('221) both disclose using the cells the applicant defines in claim 2 to grow new tooth tissue (column 3, lines 45-49 and column 5, lines 26-41, respectively).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the cells that the Hammarstrom et al. references disclose in the invention in Burg. The motivation for doing so would be to create new tooth tissue using the type of scaffolding method in Burg. Therefore it would have been obvious to combine Hammarstrom et al. ('891) or Hammarstrom et al. ('221) with Burg to obtain the invention as specified in claims 1-4.

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12. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walter et al. in view of each of Hammarstrom et al. ('891) and Hammarstrom et al. ('221).

Walter et al. discloses using a porous polymer matrix as a scaffold in order to grow tissue and has been discussed above. However, Walter et al. does not disclose that the method can include using the tooth cells that the applicant defines in claim 2. Hammarstrom et al. ('891) and Hammarstrom et al. ('221) both disclose using the cells the applicant defines in claim 2 to grow new tooth tissue (column 3, lines 45-49 and column 5, lines 26-41, respectively).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the cells that the Hammarstrom et al. references disclose in the invention in Walter et al. The motivation for doing so would be to create new tooth tissue using the type of scaffolding method in Walter et al. Therefore it would have been obvious to combine Hammarstrom et al. ('891) or Hammarstrom et al. ('221) with Walter et al. to obtain the invention as specified in claims 1-4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis B Ribar whose telephone number is (703) 305-3140. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Travis B Ribar  
Examiner  
Art Unit 1711

TBR  
November 13, 2002



James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700